Amendments to the Claims

The following Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (original): A method for compressing image data, comprising the steps of:

decomposing the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane; and

forming an encoded bit-stream by coding bit-planes of coefficient data in the code-blocks according to an arithmetic coding scheme in order to form an encoded bit-stream;

wherein coefficient data from at least one bit-plane is included in the encoded bit-stream without arithmetic coding.

Claim 2 (original): A method as claimed in claim 1, wherein the arithmetic coding scheme operates in a plurality of coding passes, and wherein at least one of the arithmetic coding passes for the coefficient data from said at least one bit-plane is not performed during the image data compression.

Claim 3 (original): A method as claimed in claim 2, wherein coefficient data from bit-planes $p<p_0-K$ are written directly into the encoded bit-stream without arithmetic coding, wherein p_0 denotes the most significant bit-plane of the code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 4 (original): A method as claimed in claim 3, wherein $K = 3$.

Claim 5 (original): A method as claimed in claim 1, wherein the method for compressing image data is based on embedded block coding with optimized truncation and employs a Wavelet transform.

Claim 6 (original): An image data compression system, comprising:

a decomposition processor which decomposes the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane; and

an arithmetic coder coupled to the decomposition processor which forms an encoded bit-stream by coding bit-planes of coefficient data in the code-blocks according to an arithmetic coding scheme;

wherein the arithmetic coder is constructed such that coefficient data from at least one bit-plane is not subjected to said arithmetic coding scheme so as to be included in the encoded bit-stream without arithmetic coding.

Claim 7 (original): An image data compression system as claimed in claim 6, wherein the arithmetic coding scheme operates in a plurality of coding passes, and wherein at least one of the arithmetic coding passes is bypassed for the coefficient data from said at least one bit-plane during the image data compression.

Claim 8 (original): An image data compression system as claimed in claim 7, wherein the arithmetic coder operates such that coefficient data from bit-planes $p<p_0-K$ are written directly into the encoded bit-stream without arithmetic coding, wherein p_0 denotes the most significant bit-plane of the code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 9 (original): An image data compression system as claimed in claim 8, wherein $K = 3$.

Claim 5 (original): An image data compression system as claimed in claim 6, wherein the arithmetic coder is based on embedded block coding with optimized truncation and the decomposition processor employs a Wavelet transform.

Claim 11 (canceled)

Claim 12 (new): The method of claim 1, wherein arithmetically coded bit-plane data is interleaved with the bit-plane coefficient data included in the bit-stream without arithmetic coding.

Claim 13 (new): A method for compressing image data, comprising the steps of:

decomposing the image data into code-blocks of coefficients using a transform, each code-block comprising a plurality of bit-planes from a most significant bit-plane to a least significant bit-plane;

processing bit-planes of coefficient data in the code blocks in multiple coding passes to generate raw bit-plane data;

arithmetically coding a portion of raw bit-plane data to generate arithmetically coded data; and

writing the arithmetically coded data and the raw bit-plane data not arithmetically coded directly into a bit-stream.

Claim 14 (new): The method of claim 13, wherein raw bit-plane data generated during at least one coding pass for a prescribed class of bit-planes is written directly into the bit-stream.

Claim 15 (new): The method of claim 14, wherein raw bit plane data generated during at least one coding pass for bit-planes $p<p_0-K$ is written directly into the bit-stream, wherein p_0 denotes the most significant bit-plane of a code block in which any sample therein becomes contextually significant during arithmetic coding and K is an integer parameter.

Claim 16 (new): The method of claim 15, wherein $K = 3$.

Claim 17 (new): The method of claim 13, wherein the method for compressing image data is based on embedded block coding with optimized truncation and employs a wavelet transform.

Claim 18 (new): The method of claim 13, wherein arithmetically coded data is interleaved with raw bit-plane data in the bit-stream.

Amendments to the Drawings

The attached Appendix contains replacement and annotated sheets of drawings that include changes to Figure 1. In particular, reference numbers and the figure label designation "(Prior Art)" have been added to Figure 1. The attached replacement sheet replaces the original drawing sheet including Figure 1. The attached Appendix also contains Figure 3, which is newly added by this Amendment.

Appendix: Replacement Sheet
Annotated Sheet Showing Changes
New Drawing Sheet